

## JOHN DEWEY SOCIETY: 2014 PAST PRESIDENT'S PANEL

THE NEED FOR "CONNECTEDNESS IN GROWTH":  
EXPERIENCE AND EDUCATION AND THE NEW  
TECHNOLOGICAL CULTURE

Stefano Oliverio

I. IS DIGITAL TECHNOLOGY THE  
REALIZATION OF PROGRESSIVE EDUCATION?

In this paper, I will endeavour to revisit a central theme of Dewey's *Experience and Education* and show its continuing relevance by contextualizing it within a momentous issue in education today. More specifically, I will attempt to proceed along the path of Dewey's engagement with progressive education by marshalling some of his arguments in discussing what I will call—with a touch of irony—a techno-revolutionary tone recently adopted in education.

It is appropriate to specify in advance what I mean by this expression. Nobody can gainsay that we are facing major developments in technology and in the human ways of producing, organizing, and disseminating knowledge, and that we must draw important educational consequences from this by restructuring, and even revamping, our educational institutions, as Leonard Waks (2013) has argued in his latest book.<sup>1</sup> At the same time, though, in contemporary educational discourse both at the scholarly level and—with a potentially more calamitous impact—at the level of documents issued by international institutions,<sup>2</sup> there is a tendency to consider digital technology as the predominant (if not the only) answer to the problems and untapped possibilities of education today.

Suggesting that this kind of answer is completely wrong would be foolish. What raises some misgivings, however, is the often uncritically salvific tone in which it is given, as if it were just a matter of more technology or more "digital awareness" in schools. What strikes me in this kind of discourse—when it assumes a sort of millenarian tone of unconditional trust in the benefits of technology—is that the emphasis on digital technology is not accompanied by an adequate reflection on what kind of experiences it promotes and whether and in what sense they are educative.

To put it another way, if a transformation or overhaul of our educational landscape is much needed, in fully exploiting the resources of contemporary technology every change demands, as its very precondition, an increase in our thinking about education and, above all, an effort to be clear about the "collateral learning" (LW 13, 29)<sup>3</sup> that digital technology (in the broadest sense) occasions. From this perspective, appealing to

Dewey could be critical. Indeed, on the one hand, as Larry Hickman (1990, 2001)<sup>4</sup> has pointed out, Dewey was one of the most sensitive interpreters of the need for a “technological culture” and was completely alien to those forms of “apologetic Luddism” (Hickman 2003, 36)<sup>5</sup> characterizing a great deal twentieth-century philosophical reflection on technology. On the other hand, with *Experience and Education* Dewey provides us with a model of how to engage with some detrimental drifts that even “good” ideas and methods can incur. With that said, I will take his approach as paradigmatic of how we can contain and problematize some of our enthusiasm about the role technology can play in bringing education out of its current predicaments.

As a jumping off point, I take my initial cue from an interesting volume by Marc Prensky, *Teaching Digital Natives* (2010).<sup>6</sup> At the very beginning of the book, he considers together

three strands of current educational discussion: . . . First, that the students in our classrooms are changing—largely as a result of their outside-of-school experiences with technology—and are no longer satisfied with an education that doesn’t immediately address the real world in which they live. Second, that the “telling and testing” pedagogy . . . has become less and less effective with today’s students. A better pedagogy is needed, and the good news is that it’s available and usable today. Third, that the digital technology now coming, more or less rapidly, into our classrooms—if used properly—can help make our students’ learning real, engaging, and useful for their future. (2010, xv)

Prensky then drives home the point that

ironically, it is the generation raised on the expectation of interactivity that is finally ripe for the skill-based and “doing-based” teaching methods that past experts have always suggested are the best for learning, but that were largely rejected by the education establishment as being too hard to implement. The happy thread tying the three strands together is that the same digital technology which caused the changes in our students also provides the tools to finally implement the most effective, real ways of learning. (2010, xv)

What is interesting in this way of choreographing the discussion is that digital technology is viewed as the real condition for the accomplished realization of the project of progressive education. In other words, what used to be difficult to put into practice will now be readily viable.

In a sense this could be correct, but it can also insinuate that a competent use of technology and new media is per se conducive to forms of “modern education” (in a eulogistic sense). By saying that digital technology realizes the project of progressive education, Prensky seems to adhere to an interactional mind-set rather than

a transactional one (LW 16: 96 ff.), the latter requiring that progressive education methods and technology not be taken as separate poles. However, what is needed, on the one hand, is to understand how "progressive" methods should be attuned to digital technology and, on the other, in what ways digital technology should be in-habited to release its educative potential.<sup>7</sup>

In understanding technology as something that fills a pre-existing gap in the viability of progressive education and, therefore, as a factor of potentially autonomous change, there is the danger of *de-situating* technology. I am not going to discuss the many reasonable (and useful) remarks Prensky makes when he illustrates his proposal regarding "partnering." I will concentrate only on his "apostasy": "So in partnering, it is the students' job—not the teacher's—to use whatever technology is available. . . . When it comes to technology, the teacher is the guide, the coach, and the quality controller, not the user" (2010, 100).

There might be plenty of reasons to support such an approach, but in the present context I prefer to highlight the way it risks not complying with the criterion of interaction, as it is conceptualized in *Experience and Education* (LW 13, 22 ff.): should not the educator/teacher take responsibility for regulating the objective conditions represented by technology? If we cling to the Prensky apostasy, do we not give up one of our most urgent tasks as educators? How can we educate if we are not an integral part of that situation represented by the experience of the student with technology (a privileged experience, moreover)?<sup>8</sup>

This crucial idea of Prensky (one of the pillars of his notion of partnering)—whatever advantages it may have—seems to be a consequence of the major aforementioned misstep: the methods of progressive education (embodied in Prensky's teacher) and digital technology (embodied in students) are two poles whose partnering risks being ultimately interpreted as a kind of interaction (in the sense worked out in *Knowing and the Known*) and not a transaction.

The challenge of creating a genuinely modern education is linked,<sup>9</sup> instead, with an effort to situate digital technology appropriately within the educational transaction, and this requires that we think in educational terms about that technology and, in doing so, separate the uses that can be educationally beneficial from those that may be educationally harmful.

Against this backdrop, I will, in the following two sections of this paper, focus first on the ways in which the web's presentism risks undermining and dissolving the continuity that Dewey took as one of the criteria of educative experience. My argumentation will possibly sound a bit circuitous: indeed, instead of addressing the issue directly with Deweyan resources, I will draw upon some ideas of the contemporary French philosopher Bernard Stiegler, but interpreted through a Deweyan lens.

Stiegler's works on technology have been receiving increasing attention in many philosophical-educational camps. What I find rewarding in passing through him is that he situates his reflection on the impact of new technology within the

framework of a sustained elaboration on how the latter risks eroding intergenerational relationships, and how new intergenerational relationships should be recreated through a new arrangement of different technologies. In this sense, Stiegler seems to offer a fruitful reverse perspective compared with so-called “partnering approaches,” which appear to champion a kind of coexistence and division of technological labor between old and new generations. While helping us to bring into a sharper focus some crucial Deweyan tenets, Stiegler’s ideas should be not only complemented, but also critiqued and reconstructed, through this Deweyan lens in order to avoid certain unwelcome educational outcomes. As mentioned earlier, Dewey has given us powerful resources to think about a technological culture: if section two of the paper is devoted more to technology, section three deals with the question of culture, exploring a possible Deweyan understanding of culture, and, subsequently, outlining a Deweyan notion of “convergence culture” understood as the endeavor to bring different media together intelligently.

The emphasis on intergenerational relationships in the arrangement of new and old technology (as opposed to mere partnering), the Deweyan interpretation of what culture is, and the idea of convergence culture, should be understood as three facets of the same prism, which I suggest capturing in the Deweyan notion of “connectedness in growth,” that is, the demand to connect “new objects and events . . . to those of earlier experiences” (LW 13, 50). I propose construing this notion—in a possibly broader but hopefully not un-Deweyan way—as the overarching idea discerning the need for continuity (between generations, kinds of experiences, and forms of knowledge, technology, and media) in order for growth, as the primary goal of education, to occur.

## II. IN PRAISE OF CONTINUITY AS AN ANTIDOTE TO THE WEB’S PRESENTISM: EDUCATION AS RE-COLLECTION

At the very beginning of *Teaching Digital Natives*, Marc Prensky counters the widespread opinion that contemporary students have “short attention spans or the inability to concentrate” (2010, 2), and he cites as evidence the intensity of immersion in movies or video games. Now, as educators, we should ask whether this immersion is the only kind of concentration we aspire for in our students. Katherine Haynes (2007) has distinguished between *hyper* and *deep attention*: the former is “characterized by switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom” (187);<sup>10</sup> the latter is “characterized by concentrating on a single object for long periods . . . , ignoring outside stimuli while so engaged, preferring a single information stream, and having a high tolerance for long focus times” (187).

In elaborating on Haynes’ work, Stiegler (2006, 175) places a strong emphasis on the fact that “the school is the school of attention,” and he links the question of deep attention with that of knowledge and of the mission of the school.<sup>11</sup> In Stiegler’s (2008) words, depth of attention consists in

the length of the circuits of transindividuation it activates . . . It is the *numerous connections* in which the circuit and its length consist, forming also a network, that constitutes this depth, which is a sort of texture, like a fabric, a resistant textile, thick indeed, . . . to the extent that the connections operate according to rules, which are also stitches and form 'points' precisely in the sense the word [in French *SO*] has in the technique of knitting. (148)<sup>12</sup>

To use a different vocabulary and begin bending (even "twisting") Stiegler's remarks toward a Deweyan horizon, by "circuits of transindividuation" we can understand knowledge as an intergenerational enterprise, collected in studies and transmitted through media that, by exteriorizing knowledge, guarantee its continuity and make possible the process of its de- and recontextualization and its reappropriation. Studies are bodies of logically organized knowledge. The adverb "logically," which I am using in a Deweyan sense, is the most appropriate configuration of the operation of collecting.<sup>13</sup>

A key feature of this knowledge, Stiegler (2008, 127) notes, is that "it organizes the inter-generational relations." But this organization of intergenerational relations could not take place without a set of technologies that make the transmission of a heritage possible, without what Stiegler—with a nod to Plato—calls *hypomnemata* (or supports for memory). One of the faults of a purely idealistic educational approach consists in not taking into account the "materiality" of these technologies and their constitutive role in the educational process.

The history of school systems is marked by the transformation of the *hypomnemata*, and a major task of school systems, Stiegler argues, has always been the organization of these *hypomnemata* in order to make the intergenerational dialogue take place in the medium of knowledge (to summarize the dynamics in a formula, bringing together media, knowledge, and intergenerational relations).

Stiegler (2008, 121) states that "the educational system [is] the transformation of psycho-technology into noo-technology," that is, as I propose understanding him, the educational system—education as a systematic undertaking—intervenes organizationally in the media which impact on our psychological processes to transform them into technology that promotes intelligence. This should be understood as the way we access knowledge as the object of circuits of transindividuation that guarantee that continuity which would be otherwise undermined.

I would not endorse the educational thinking of Stiegler as a whole, since his continues to be a "pedagogy of listening attentively," always on the brink of tipping over into perpetuating the kind of pedagogy Dewey wanted to do away with. And yet, I find what Stiegler calls the "pharmacological" perspective on technology of some use. *Pharmakon*, in ancient Greek, is both something poisonous and something curative. The pharmacological perspective invites us as educators not to be content with partnering students by leaving the full use of technology to them, as Prensky suggests, and reserving to ourselves only the role of interlocutors who encourage

them—even through warnings—to make a better use of new media and digital technology. We should, instead, organize, together *with* the students, the set of *hypomnemata* in such a way as to allow the students to have an educative experience.

This educative experience is challenged by the new *hypomnemata*, if they are not organized in light of educational thinking, which attack the character of this necessary continuity. This is the key point I want to raise by idiosyncratically appropriating and reinterpreting in a Deweyan vein—and not without some hermeneutical twists—the thoughts of Stiegler on knowledge. In the aforementioned passage, Stiegler mentions the notion of a “network,” but he reads it within the semantic field of texture/fabric/textile. The question to be asked, then, is whether the “numerous connections of the circuits of transindividuation” forming a network correspond to networked knowledge in the sense many authors have been making current today. As David Weinberg (2011) puts it, networked knowledge is an “*unshaped* web of connections within which expressions of ideas live” (118, emphasis mine) and “is thus less a system of stopping points than a web of temptations” (113).<sup>14</sup>

In opposition to this idea of “networked knowledge,” I suggest that the “textured network” of Stiegler (as I interpret it) is closer to Dewey’s “connectedness in growth” (LW 13, 50) and to his idea of a “process [as] a continuous spiral” (LW 13, 53) in which “the new facts and new ideas thus obtained become the ground for further experiences in which new problems are presented” (ibid.).

I would like to answer in advance a possible objection to this reading. Indeed, replacing the authority-oriented logic of the stopping points in knowledge with a web of temptations (embodied in the array of links that populate any content on the web) could appear somewhat in tune with Dewey’s idea that what counts most is the formation of the attitude “of desire to go on learning” (LW 13, 29). One could, actually, argue—through a Prensky-like move—that networked knowledge has come to provide the most able technological infrastructure to realize the project of Dewey, who in his times would have struggled with the limits of old technology that implicitly supported the traditional conception of education and schooling. But I would like to counter this interpretation: the “desire to go on learning” to which Dewey aspires is not unshaped (to use Weinberger’s word), and does not amount to the response to a web of temptations. On the contrary, Dewey would probably be ready to spot in this interpretation of the web the risk of having experiences “so dispersive as to be chaotic” (LW 13, 55). In my understanding, the fact that Dewey would have welcomed the eradication of the idea of knowledge as a series of stopping points—which block the process of inquiry—should not be confused with advocating a process of the proliferation of links, ultimately unreflectively organized, which, by following, the student would be encouraged to go on learning.

In engaging with the question of the form of knowledge inscribed in the web and in digital technology, I find relevant the objection that Dewey made to some trends of progressive education, namely, that they failed “to recognize that the problem of

selection and organization of subject-matter for study and learning is fundamental" (LW 13, 52). I would suggest approaching this issue by considering the lack—on the web—of what I will call *temporal depth*. All content is present on the web in a continuous present (which is something completely different from, and even diametrically opposed to, Deweyan continuity). There is no past and no future. The web risks dismantling awareness of how any human cognitive undertaking is contextualized and historicized. In Dewey's words, "The inescapable linkage of the present with the past is a principle whose application is not restricted to a study of history" (LW 13, 52).

There is, in Dewey, a close relationship between the question of organization and that of the past—which bears witness, as I will argue below, to Dewey's Hegelian "permanent deposit" (LW 5, 154). The organization and selection realized by the teacher is guided by that organization of knowledge which developed historically and is embodied in the subject matter, which cannot and should not be a "starting point [but] nevertheless, . . . represen[t] the goal toward which education should continuously move" (LW 13, 56). These subject matters are, in my interpretation, a possible Deweyan word for what Stiegler calls long circuits of transindividuation organizing intergenerational relations. They "embody the cumulative outcome of the efforts, the strivings, and successes of the human race generation after generation. They present this, not as a mere accumulation, not as a miscellaneous heap of separate bits of experience, but in some organized and systematized way—that is, as reflectively formulated" (MW 2, 278).

They play a pivotal role in education insofar as the "surveyed and arranged result occupies a critical position in the process of growth. It marks a turning-point. It shows how we may get the benefit of past effort in controlling future endeavor. In the largest sense the logical standpoint is itself psychological; it has its meaning as a point in the development of experience, and its justification is in its functioning in the future growth which it insures" (MW 2, 285).

The "psychologized" subject matters contribute to the development of the child, which is "a development of experience and into experience" (MW 2, 282), and to his or her "expanding consciousness" (MW 2, 288).

This is the understanding that Dewey gave to the Hegelian *Erinnerung* by keeping, on the one hand, the role that the past ("logically organized" in studies) has on the organization of experience, but, on the other hand, breaking its grip insofar as he opened it onto the future (there is connectedness but in growth). The Deweyan *Erinnerung* should be understood as a kind of re-collecting, and, accordingly, as a recursive process, or, in Dewey's words, "a continuous spiral" (LW 13, 53).<sup>15</sup> It moves from the "psychologized" subject matters—that is "turned over, translated into the immediate and individual experiencing within which [they have their] origins and significance" (MW 2: 285)—toward the subject matters that are a realization of the work of the logos as the work of collecting and organizing the experience of the race (obviously without ever losing connection with the level of individual experience).



This complex dynamic risks being unshaped, deformed, by the “logic” governing the web as an “unshaped web of connections” (Weinberger 2011, 118) that lacks any temporal depth and replaces continuity with the continuous present of hyperlinking.

I am not here advocating an abandonment of digital technology, new media, and the resources of the web in education because, in the wake of the Deweyan re-appropriation of some tenets of Stiegler, I think that a major task of the educational system is precisely that of organizing the set of *hypomnemata* obtaining in a specific historical constellation by transforming psycho-technologies into noo-technologies.

We cannot escape our times, but we are appealed to represent our times in a better way, and this requires us to organize the use of technology educationally. Because it is not digital technology per se that realizes the objectives of progressive education, as Prensky seems to insinuate, it should not, accordingly, be left only to the students (according to the Prensky “apostasy”), but it constitutes one (if not the most important) of the objective conditions teachers should contribute to modeling.

This pharmacological attitude obviously counters positions—like that of Judy Breck (2006)—which maintain that the way knowledge is networked and hyperlinked on the web mirrors the structure of the human mind, and even the neural circuits of our brain.<sup>16</sup> Even if this were the case, it is moot whether it would be educationally desirable. Indeed, we do not need (only) networks in which to go on learning from link to link, but rather what I have called, by idiosyncratically interpreting some remarks of Stiegler, textured networks, networks that permit us that process of re-collection described above.

By textured networks I mean networks that dovetail the “logic” of the web with that of books. The phrase “logic of books” is to be understood very broadly as the type of organization of knowledge that books have embodied, as well as the set of knowledge practices and cognitive acts that the culture of book has promoted. What I am pointing to is poles apart from any homeostatic approach to education, invoking “teaching as a conserving activity” in Neil Postman’s (1979) sense.<sup>17</sup> Indeed, positions like the latter’s risk escaping the responsibility for establishing an intergenerational dialogue through and within contemporary *hypomnemata* and being just the reverse of “partnering approaches.” As I suggest understanding it, the reference to books is not the appeal to a counterweight to balance the logic of the web by opposing the formal, book-oriented curriculum to the hidden curriculum of digital technology, but rather to deploy also the book logic as one of the elements that composes the new integrated arrangement of *hypomnemata* within the educational system—and one of the tasks of educators will be precisely that of contributing to such a new integrated arrangement. This implies not merely, for instance, reading books along with using the Internet, but rather devising pedagogical strategies and “protocols of use” that equip students with the ability of inhabiting and exploring the Internet galaxy (also) with some of the logica’ resources provided by the Gutenberg galaxy (and vice versa). This may sound like a slogan,



and it is certainly a difficult task. But, as I will argue in the next section, although it requires significant inventiveness, it is something that has already occurred in history (in reference to other media).

### III. TOWARD A DEWEYAN THEORY OF CONVERGENCE CULTURE

Douglas Thomas and John Seely Brown (2011) have given powerful expression to what is at stake in the current debate on education and technology, and to a widespread sentiment about what the direction should be. They have captured the radical novelty introduced by digital technology in a formidable metaphor. They have opposed to the traditional notion of culture, understood as "an existing, stable entity that changes and evolves over long periods," (36)<sup>18</sup>

a second sense of culture [according to which] a culture is what a scientist grows in a petri dish in a lab under controlled conditions. . . . One of the basic principles of this kind of cultivation is that you don't interfere with the process, because it is the process itself that is interesting. In fact, the entire point of the experiment is to allow the culture to reproduce in an uninhibited, completely organic way, within the constraints of medium and environment—and then see what happens. (37)

This appeals to an important metaphor that should be analyzed in depth. I will confine myself to some succinct remarks. First, by evoking a lab, the authors implicitly refer to an artificial environment, detached from the *Lebenswelt* and reproducing the conditions of experience, but in a way that risks being decontextualized and ultimately disembodied. In doing so the authors may be victims of the "primordial" fault of Western tradition; that is, the elision of the ultimately bodily rootedness of our experience. Second, and closely interwoven with the latter issue, this view cannot but exclude the "passive" element that is constitutive of experience and that is "peculiarly combined" (MW 9, 146) with the active element. Third, the kind of growth that is pursued here has no connectedness, but is valued precisely to the extent that it proceeds in an uninhibited way and as sheer proliferation. Fourth, as it is the process itself which is interesting, there can be no role for a "goal toward which education should continuously move" (LW 13, 56).

Douglas and Seely Brown's metaphor brilliantly condenses, *a contrario*, many of the concerns presented in this paper: if we rely on networked knowledge and not on a "textured networked knowledge," we risk acquiescing to a process without direction. This triggers growth without connectedness, promotes activity without a real undergoing (and, accordingly, without a real experience), and impedes any "re-collection" in the particular sense worked out above. From this perspective, although from a Deweyan point of view we can share the authors' misgivings about the traditional view of culture, we cannot, I would suggest, advocate their new idea of culture.

In *Experience and Education*, Dewey captures, with his typically uncanny capacity to plumb the deep layers of Western tradition and to readapt the “old ways of thinking,” the original sense of culture: *cultura* in Latin is originally a future participle, and this verbal mood indicates what is about to be and is upcoming, and that in which, although it does not exist yet, we can spot the beginning signs. Culture is, therefore, neither the resistance to change that Douglas and Seely Brown rightly impute to the traditional views, nor the cultivation of an unconnected proliferation that they champion. The Deweyan discourse about continuity in education (and the relationships of the past to the future) should be read, accordingly, as the most powerful reflection on what culture properly is, and it provides us with the most adequate horizon within which to interpret education as a cultural enterprise without capitulating too uncritically to the lure of self-allegedly new cultures of learning, which are always in danger, on the one hand, of repeating the dichotomies of Western tradition and, on the other, of not equipping us as educators with the conceptual tools necessary to be genuinely modern.

We could also understand this perspective in the terms of a Deweyan version of convergence culture. This is a forceful expression of Henry Jenkins (2006) that refers to the “collision” of the old and new media.<sup>19</sup> Jenkins counters what he calls

the Black Box Fallacy. Sooner or later, the argument goes, all media content is going to flow through a single black box into our living rooms (or, in the mobile scenario, through black boxes we carry around with us everywhere we go). . . . Part of what makes the black box concept a fallacy is that it reduces media change to technological change and strips aside the cultural levels. . . . Media convergence is more than simply a technological shift. (2006, 14–15)

Jenkins borrows a distinction from the historian Lisa Gitelman: “On the first [level], a medium is a technology that enables communication; on the second [level], a medium is a set of associated ‘protocols’ or social and cultural practices that have grown up around that technology” (2006, 13f). As educators, we should work, first of all, on protocols of both old and new media in order to realize that convergence I have tried to capture in the notion of the textured network.

We are today facing a challenge that equals that which marked the passage from orality to literacy.<sup>20</sup> The notion of a textured network, which dovetails the logic of the book with that of the web, will not appear as an impossible combination of entities that should be kept separated or as the product of an intellectualistic game if we think of the most ingenious example of convergence culture, which reverberated in an overhaul of educational practices—the Platonic dialogues. These were convergence culture at its best; they inserted the old media (the vividness of the living voices, the tradition of the myth, etc.) into the new media (written texts) and used the latter to propagate the former, and used the former to check possible drawbacks of the latter. The circuit that the

Platonic dialogue instantiated was doubled by the peculiar regime between writing and orality (by specific protocols in Gitelman's phrase) within the academy, which became the model of (all?) subsequent educational institutions.<sup>21</sup>

And yet, this majestic achievement and feat of ingenuity in the practice of convergence culture was accompanied by a theory of divergence, by what can be considered the primordial source of the many either-ors that have plagued Western thought. I am referring to Platonic philosophy as a device for producing divergences (between theory and practice, soul and body, science and experience, philosophy and poetry, etc.). The most striking document of this "theory of divergence," denying the practice of convergence, is the *Seventh Letter* (341c–342a), where Plato clearly opposes the possibility that his most fundamental doctrines can be the object of a written communication.<sup>22</sup>

With Dewey we have, instead, a theory of convergence that should orient us in the task of realizing a genuine practice of convergence (in our educational systems) without the latter being only dictated by the rule of the functioning of digital technology, but rather by drawing inspiration, in a sense, from Plato's technological gesture (and not from his philosophy). It is along these lines that we will be able to promote the much-needed Education 2.0 and to meet the needs of new generations without any "technolatrous" shortcuts.

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## NOTES

1. See Leonard J. Waks, *Education 2.0. The LearningWeb Revolution and the Transformation of the School* (Boulder: Paradigm Publishers, 2013).

2. As a European, I am thinking, for instance, of the rhetoric that presides over the initiatives for "ICT in Education" within the *Digital Agenda for Europe* of the Europe 2020 strategy; as an Italian, I could refer to the stress on technology in the recently much-debated government document on "La Buona Scuola" (The Good School). This emphasis on digital literacy is significantly asso-

ciated, in this document, with the need to promote innovation economically and to the proposal of introducing measures to combat the “financial illiteracy” (2014, 97) of new generations. It is an association that deserves an in-depth discussion that cannot be developed here. “Facciamo crescere il paese,” *La Buona Scuola*, [https://labuonascuola.gov.it/documenti/lbs\\_web.pdf?v=0b45ec8](https://labuonascuola.gov.it/documenti/lbs_web.pdf?v=0b45ec8).

3. Citations of the works of Dewey are to the critical edition published by Southern Illinois University Press. Volume and page numbers follow the initials of the series. Abbreviations for the volumes used are: EW *The Early Works* (1882–1898); MW *The Middle Works* (1899–1924); LW *The Later Works* (1925–1953).

4. See Larry A. Hickman, *John Dewey's Pragmatic Technology* (Bloomington: Indiana University Press, 1990); Hickman, *Philosophical Tools for Technological Culture* (Bloomington: Indiana University Press, 2001).

5. Larry A. Hickman, “John Dewey, tecnologia pragmatica e apprendimento continuo.” *Studi sulla formazione* VI, no. 1 (2003): 36.

6. Marc Prensky, *Teaching Digital Natives: Partnering for Real Learning* (Thousand Oaks, CA: Corwin, 2010). I would not consider Prensky as a representative of the “techno-latry” predominant in some camps of the public debate and also in educational matters. I would, indeed, recommend his book to teachers as a good practical guide. But only insofar as I consider Prensky's book useful does it provide a clear instance of how the risks of a quasi ‘salvific’ view of technology can infiltrate also the most balanced attempts to mobilize it.

7. I hyphenate the word (in-habit) to capture the dynamics according to which digital technology constitutes environments which we dwell in and, at the same time, is a factor of a re-definition of our habits. Better: by dwelling in it we develop new habits.

8. Commenting on the first chapter of Dewey's work, Waks notes in his *Experience and Education: A Reader's Guide* (Amazon Kindle Edition, 2013): “Instead of ‘leaving young people free to learn from the Internet,’ . . . I chart new roles for mentors, community-based practitioners and guides, and other adults . . . Following Dewey's lead, I place each individual young person's aims at the center of this constellation of older people help-meets and guides.” While Prensky would read passages like this in the direction of his idea of partnering, I would suggest interpreting it as an invitation for older people to engage (also) with an educational organization of media. I will further elaborate on this point.

9. The phrase “genuinely modern education” refers to Dewey's “Introduction: Reconstruction as Seen Twenty-Five Years Later” to the 1948 edition of *Reconstruction in Philosophy* (MW 12: 273).

10. See Katherine Haynes, “Hyper and Deep Attention: The Generational Divide in Cognitive Modes,” *Profession* (2007): 187–199.

11. Bernard Stiegler, *La télécratie contre la démocratie: lettre ouverte aux représentants politiques* (Paris, France: Flammarion, 2006), 175. All translations in this paper are the author's unless otherwise specified.

12. Bernard Stiegler, *Prendre Soin: Tome 1, De la jeunesse et des générations* (Paris, France: Flammarion, 2008), 148.

13. The Greek verb *leghein*, from which *logos* and, therefore, *logic* derive, means originally ‘to collect.’

14. David Weinberger, *Too Big to Know: Rethinking Knowledge Now that the Facts aren't the Facts, Experts are Everywhere, and the Smartest Person in the Room is the Room* (New York: Basic Books, 2011).

15. I hyphenate the word (re-collecting) to convey the meaning of a process of continuous collecting (in the sense of *leghein-logos*), drawing upon “the cumulative outcome of the efforts, the strivings, and successes of the human race generation after generation” (MW 2: 278).

16. Judy Breck, *109 Ideas for Virtual Learning: How Open Content Will Help Close the Digital Divide* (Lanham-Toronto-Oxford: Rowman & Littlefield Education, 2006). See the accurate discussion of her theories in Waks, *Education 2.0.*, 132 ff.
17. Neil Postman, *Teaching as a Conserving Activity* (New York: Dell, 1979).
18. Douglas Thomas, and John Seely Brown, *A New Culture of Learning. Cultivating the Imagination for a World of Constant Change* (Seattle: CreateSpace, 2011).
19. Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006).
20. See Walter J. Ong, *Orality and Literacy: The Technologizing of the Word*. 2nd ed. (New York: Routledge, 2002).
21. See Eric A. Havelock, *Preface to Plato* (Cambridge, MA: Harvard University Press, 1963); Havelock, *The Literate Revolution in Greece and its Cultural Consequences* (Princeton: Princeton University Press, 1981).
22. See Plato, *Plato in Twelve Volumes*, Vol. 7, translated by R. G. Bury (Cambridge, MA: Harvard University Press, 1966).

## BIBLIOGRAPHY

- Breck, Judy. *109 Ideas for Virtual Learning: How Open Content Will Help Close the Digital Divide*. Lanham, MD: Rowman & Littlefield Education, 2006.
- Dewey, John. *The Collected Works (1882–1953)*. Edited by Jo Ann Boydston. 37 vols. Carbondale: Southern Illinois University Press, 1969–1991.
- “Facciamo crescere il paese.” *La Buona Scuola*. 2014. [https://labuonascuola.gov.it/documenti/lbs\\_web.pdf?v=0b45ec8](https://labuonascuola.gov.it/documenti/lbs_web.pdf?v=0b45ec8).
- Havelock, Eric A. *Preface to Plato*. Cambridge, MA: Harvard University Press, 1963.
- . *The Literate Revolution in Greece and its Cultural Consequences*. Princeton: Princeton University Press, 1981.
- Haynes, Katherine. “Hyper and Deep Attention: The Generational Divide in Cognitive Modes.” *Profession* (2007): 187–99. doi:10.1632/prof.2007.2007.1.187
- Hickman, Larry A. *John Dewey’s Pragmatic Technology*. Bloomington: Indiana University Press, 1990.
- . “John Dewey, tecnologia pragmatica e apprendimento continuo.” *Studi sulla formazione* VI, no. 1 (2003): 34–44.
- . *Philosophical Tools for Technological Culture*. Bloomington: Indiana University Press, 2001.
- Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press, 2006.
- Ong, Walter J. *Orality and Literacy: The Technologizing of the Word*. 2nd ed. New York: Routledge, 2002.
- Plato. *Plato in Twelve Volumes*, Vol. 7. Translated by R. G. Bury. Cambridge, MA: Harvard University Press, 1966.
- Postman, Neil. *Teaching as a Conserving Activity*. New York: Dell, 1979.
- Prensky, Marc. *Teaching Digital Natives: Partnering for Real Learning*. Thousand Oaks, CA: Corwin, 2010.

- Stiegler, Bernard. *Prendre Soin: Tome 1, De la jeunesse et des générations*. Paris, France: Flammarion, 2008.
- . *La télécratie contre la démocratie: lettre ouverte aux représentants politiques*. Paris, France: Flammarion, 2006.
- Thomas, Douglas, and Seely Brown, John. *A New Culture of Learning. Cultivating the Imagination for a World of Constant Change*. Seattle: CreateSpace, 2011.
- Waks, Leonard J. *Education 2.0. The Learningweb Revolution and the Transformation of the School*. Boulder: Paradigm Publishers, 2013.
- . *John Dewey's Experience and Education. A Reader's Guide*. Amazon Kindle Edition, 2013.
- Weinberger, David. *Too Big to Know: Rethinking Knowledge Now that the Facts aren't the Facts, Experts Are Everywhere, and the Smartest Person in the Room is the Room*. New York: Basic Books, 2011.

Stefano Oliverio is a postdoctoral fellow at the SInAPSi Centre of the University of Naples Federico II. Email: stefano.oliverio@unina.it.